

**In the Claims:**

Please amend the claims as indicated below.

1. (Currently Amended) A system located at a subscriber's premises, the system comprising: transcoeder for  
an antenna configured to receive, from a satellite, -converting a received first  
digital signal with a first modulation and encoding scheme;  
a set-top box configured to receive a second digital signal with a second  
modulation and encoding scheme; and, the  
a transcoder that includes comprising:  
a demodulator that configured to produce produces a demodulated digital  
stream of data from the received first digital signal;  
a modulator in signal communication with the demodulator, where the  
modulator configured to modulate modulates the demodulated digital stream of  
data with the second modulation and encoding scheme to produce and produces a  
new modulated digital stream of data; and  
an upconverter in signal communication with the modulator, where the  
upconverter configured to produce produces the second digital signal by  
upconverting from the new modulated digital stream of data and to provide the  
second digital signal to the set-top box.
2. (Currently Amended) The system transeeder of claim 1, wherein the upconverter includes :  
an upsampler that receives the new modulated digital stream of data from the  
modulator and produces an upsampled signal;  
a complex mixer in signal communication with the upsampler, where the complex  
mixer is configured to produce capable of producing an intermediate frequency ("IF")  
digital signal by upconverting the upsampled signal with an IF carrier signal; and  
a combiner in signal communication with the complex mixer, where the combiner  
is configured to produce capable of producing the second digital signal having sampling  
replicas from the IF digital signal.

3. (Currently Amended) The system transeeder of claim 2, wherein the second digital signal may includes multiple in-phase and quadrature-phase modulated image replicas.
4. (Currently Amended) The system transeeder of claim 2, wherein a clock signal is input into both the upsampler and a digital-to-analog converter ("DAC") in signal communication with the combiner.
5. (Currently Amended) The system transeeder of claim 4, wherein the complex mixer is connected to a numerically controlled oscillator that produces the IF carrier signal.
6. (Currently Amended) The system transeeder of claim 5, wherein the IF carrier signal is at a lower frequency than the clock signal.
7. (Currently Amended) The system transeeder of claim 5, wherein the numerically controlled oscillator is an internal component of the transcoder.
8. (Currently Amended) The system transeeder of claim 5, wherein the numerically controlled oscillator is an external component of the transcoder.
9. (Currently Amended) The system transeeder of claim 1, wherein the first modulation and encoding scheme is 8-PSK Turbo Coding.
10. (Currently Amended) The system transeeder of claim 9 [[1]], wherein the second modulation and encoding scheme is QPSK.
11. (Currently Amended) A transcoder for use in a system, located at a subscriber's premises, that includes an antenna and a set-top box, the antenna configured to receive, from a satellite, a received first digital signal with a first modulation and encoding scheme, and the set-top box configured to receive a second digital signal with a second modulation and encoding scheme, the transcoder comprising:

a demodulator configured to demodulate ~~means for demodulating~~ the received first digital signal to produce a demodulated digital stream of data;

a modulator configured to modulate ~~means for modulating~~ the demodulated digital stream of data with the second modulation and encoding scheme to produce a new modulated stream of data; and

an upconverter configured to upconvert ~~means for upconverting~~ the new modulated digital stream of data to produce the second digital signal, and to provide the second digital signal to the set-top box.

12. (Currently Amended) The transcoder of claim 11, wherein the upconverter ~~means~~ includes:

means for upsampling the modulated digital stream and producing an upsampled signal;

means for mixing the upsampled signal with an intermediate frequency ("IF") carrier signal to produce an IF digital signal; and

means for converting the IF digital signal to the second digital signal having sampling replicas.

13. (Currently Amended) The transcoder of claim 12, wherein the second digital signal ~~may include~~ multiple in-phase and quadrature-phase modulated image replicas.

14. (Previously Presented) The transcoder of claim 12, wherein a clock signal is input into both the upsampling means and a DAC in signal communication with the converting means.

15. (Previously Presented) The transcoder of claim 14 wherein the mixing means is connected to a numerically controlled oscillator that produces the IF carrier signal.

16. (Previously Presented) The transcoder of claim 15 wherein the IF carrier signal is at a lower frequency than the clock signal.

17. (Previously Presented) The transcoder of claim 12, wherein the mixing means is connected to a numerically controlled oscillator that produces the IF carrier signal that is utilized by the mixing means.

18. (Previously Presented) The transcoder of claim 17, wherein the IF carrier signal is at a lower frequency than the clock signal.

19. (Original) The transcoder of claim 11, wherein the first modulation and encoding scheme is 8-PSK Turbo Coding.

20. (Currently Amended) The transcoder of claim 19 [[11]], wherein the second modulation and encoding scheme is QPSK.

21. (Currently Amended) A method for converting a first digital signal with a first modulation and encoding scheme to a second digital signal with a second modulation and encoding scheme, the method comprising:

receiving, at a subscriber's premises, the first digital signal from a satellite;  
demodulating the [[a]] received first digital signal having a received modulation  
and encoding scheme to generate the first digital signal;  
modulating the demodulated first digital signal with the second modulation and encoding scheme, wherein the modulating produces a new modulated digital signal; and  
upconverting the new modulated digital signal to produce the second digital signal; and

providing the second digital signal to a set-top box located at the subscriber's premises.

22. (Previously Presented) The method of claim 21, wherein the step of upconverting includes:

upsampling the new modulated digital signal;  
mixing the upsampled new modulated digital signal with an intermediate frequency ("IF") carrier signal to produce an IF digital signal; and

sampling the IF digital signal through a mixer to produce the second digital signal.

23. (Previously Presented) The method of claim 21, wherein the first modulation and encoding scheme is 8-PSK Turbo Coding.

24. (Currently Amended) The method of claim 23 [[21]], wherein the second modulation and encoding scheme is QPSK.